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DoD Public Meeting: Detection and Avoidance of Counterfeit Electronic Parts – Further Implementation

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Henry Livingston
BAE Systems

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Central Tenets of Counterfeit Avoidance and Detection Recommended by Subject Matter Experts

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- ✓Apply supplier preferences for electronic parts purchased from original manufacturers or their authorized distributors,

- ✓Perform due diligence in accordance with recognized industry standards to avoid counterfeits when purchases from sources of supply other than the original component manufacturer and its authorized distribution chain are necessary, and

- ✓Notify government and industry of suspected counterfeits when they are encountered.

Final rule under DFARS Case 2012-D065 applies these central tenets!

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Clarity provided in the final rule under DFARS Case 2012-D055:

- Definition for “counterfeit part”
  - confined to electronic parts
  - removes the element within the proposed rule that would have potentially included non-conformances in general to also be instances of counterfeiting.
- Clear preference articulated for parts acquired from original manufacturers or their authorized dealers.
- Counterfeits are not to be returned to the seller.
- Existing inventory is subject to the new DFARS clauses.
- Determination of risk for counterfeit detection testing based on minimizing risk to the Government
- Reporting of suspect counterfeits and counterfeits to the DoD IG is not automatically required in the absence of Mandatory Disclosure criteria

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Recommendations for further implementation of NDAA2012§818

- Issues requiring further clarification and implementation guidance:
  - Definition and adequacy criteria for all elements of the "Contractor Counterfeit Avoidance and Detection System"
  - Allowable vs. Unallowable Costs
  - COTS Electronic Assemblies
  - Electronic Parts Obsolescence
  - Risk-Based System
  - Embedded Software or Firmware
  - Traceability Expectations
  - "Reasonable Doubt" that an Electronic Part is Authentic

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Counterfeit Electronic Part Detection and Avoidance System

- The final rule under DFARS Case 2012-D055 expands and clarifies some elements, but does not …
  - Define or describe expectations for all system elements
  - Set forth criteria for system adequacy
- Consider soliciting contractor input when crafting criteria for an acceptable system.

System Elements …

1. The training of personnel.
2. The inspection and testing of electronic parts …
3. Processes to abolish counterfeit parts proliferation.
4. Processes for maintaining electronic part traceability…
5. Use of suppliers that are the original manufacturer, or {authorized dealer}
6. Reporting and quarantining …
7. Methodologies to identify suspect counterfeit …
8. Design, operation, and maintenance of systems …
9. Flow down of counterfeit detection and avoidance requirements …
10. Process for keeping continually informed of current counterfeiting information and trends …
11. Process for screening GIDEP reports and other credible sources …
12. Control of obsolete electronic parts …

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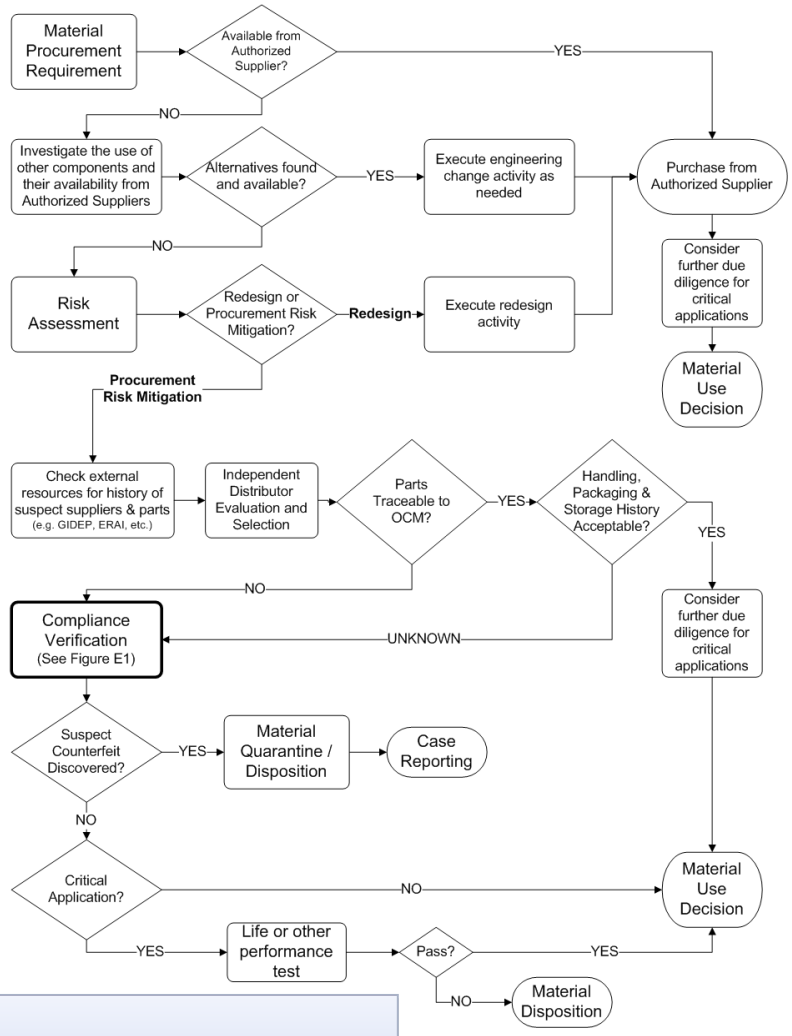
Allowable vs. Unallowable Costs

- Industry and Government would benefit from bright line guidance now on what would and would not be allowable costs.
- Costs incurred to implement the “Counterfeit Electronic Part Detection and Avoidance System” should be allowable costs.
  - *“… detecting and avoiding the use or inclusion of counterfeit electronic parts or suspect counterfeit electronic parts…”* [NDAA2012§818(c)(2)(a)]



AS5553, Figure B3 – Procurement Risk Mitigation

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COTS Electronic Assemblies

- The final rule under DFARS Case 2012-D055 requires contractors to flow down counterfeit electronic part detection and avoidance system requirements for commercial items (including COTS items)

- From our experience, COTS producers generally …
  - advise customers that the best way to avoid counterfeits of its finished products is to purchase finished products directly from the OEM or its authorized dealer
  - will not accept requirements for a counterfeit electronic part detection and avoidance system

- The final rule creates a significant dilemma for contractors.

- Though the final rule states that DoD is not subject to this requirements for its own purchases, guidance from DoD based on its own implementation would be immensely helpful to contractors.

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Electronic Parts Obsolescence

- The final rule under DFARS Case 2012-D055 acknowledges *"parts obsolescence is a matter of concern because it can create vulnerabilities in the supply chain"*, but ...

- Does not ...
  - Acknowledge that obsolescence risk mitigation depends largely on collaboration between DoD and its contractors
  - Address mechanisms necessary to support this collaboration

- NDAA2014§808 requires DoD to implement a process to identify and replace obsolete electronic parts included in acquisition programs.
  - We hope the outcome fosters collaboration between DoD and its contractors

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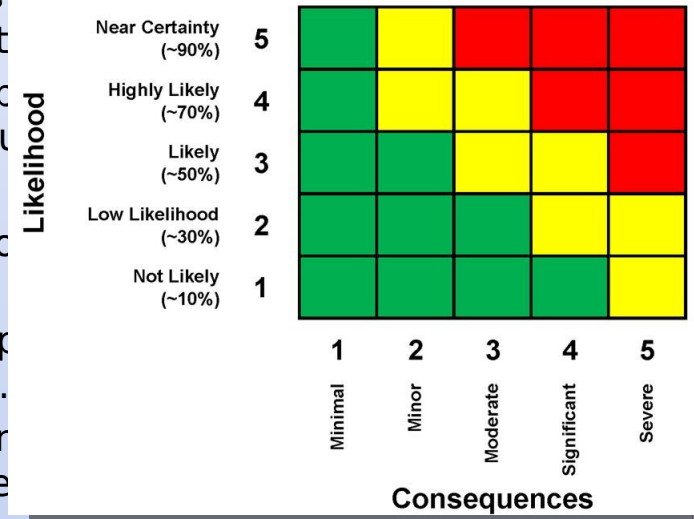
Risk-Based System

- For the selection of tests and inspections to detect counterfeits, the final rule under DFARS Case 2012-D055 calls for …
  - A risk-based approach
  - Selection based on minimizing risk to the Government …
    - Probability of receiving a counterfeit
    - Probability that the inspection or test selected will detect a counterfeit
    - Potential negative consequences of a counterfeit electronic part being installed
- For other elements of the "system" …
  - To what extent is use of a risk-based approach appropriate?
  - What is the basis for determination of risk?

System Elements …

1. The training of personnel.
2. The inspection and testing of electronic parts …
3. Processes to abolish counterfeit parts proliferation.
4. Processes for maintaining electronic part traceabilit
5. Use of sup manufactu
6. Reporting
7. Methodolo …
8. Design, op systems …
9. Flow down avoidance
10. Process for keeping continually informed of current counterfeiting information and trends …
11. Process for screening GIDEP reports and other credible sources …
12. Control of obsolete electronic parts …



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Embedded Software and Firmware

- The definition of *"electronic part"* in the final rule under DFARS Case 2012-D055 includes *"embedded software and firmware"*
  - Presumably refers to software and firmware embedded within certain types of "integrated circuits", such as Field Programmable Gate Arrays.

- The elements of the *"Contractor Counterfeit Electronic Part Detection and Avoidance System"* described in NDAA2012§818 and reflected in the final rule, however, are meaningful for hardware (e.g. transistor, capacitor, resistor, or diode)

- The final rule under DFARS Case 2012-D055 depends on standards which are hardware centric, such as AS5553 and AS6174 cited in the FAR Case 2012-032 on *"Higher-Level Contract Quality Requirements"*

- For *"embedded software and firmware"*, recommend DoD …
  - Describe expectations for all system elements
  - Set forth criteria for system adequacy

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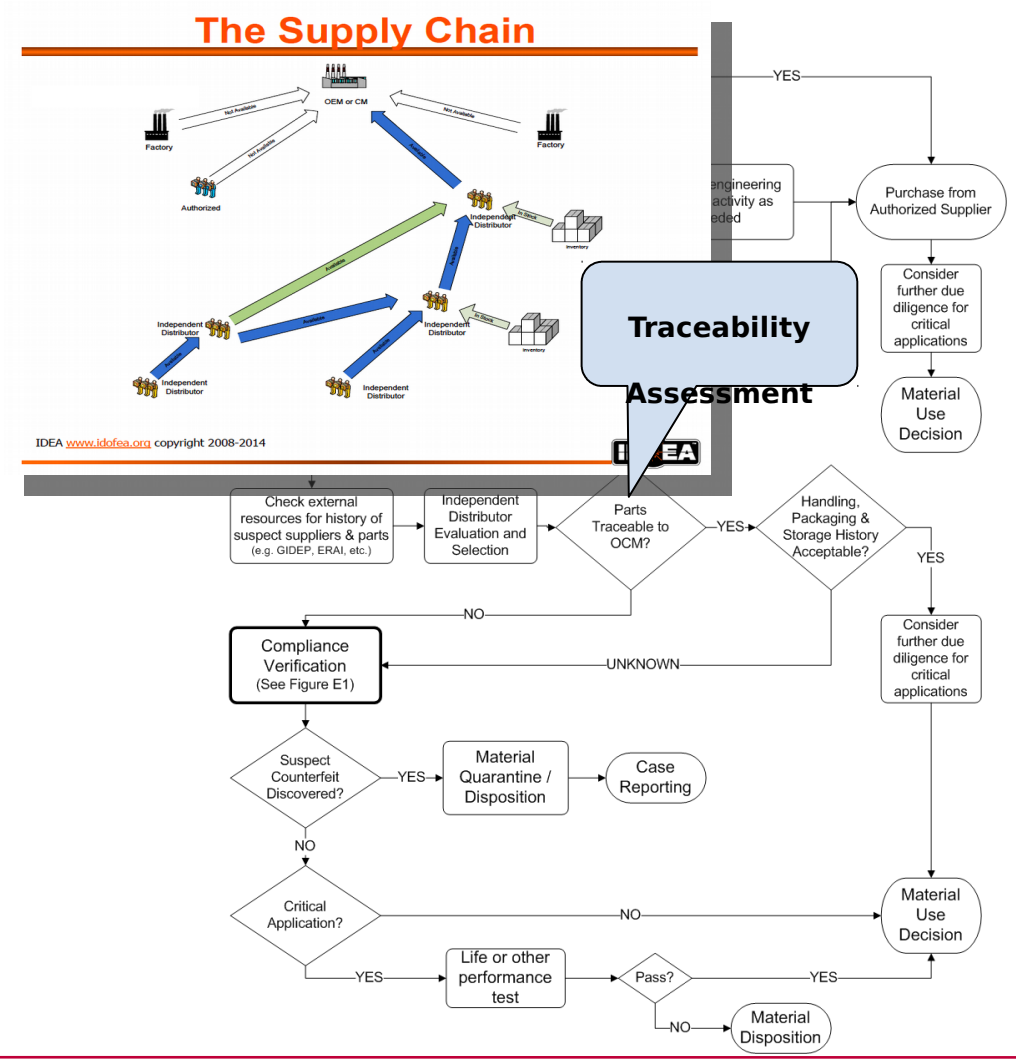
Traceability Expectations

- The final rule under DFARS Case 2012-D055 requires the use of processes for maintaining electronic part traceability back to the original manufacturer
- Does the traceability requirement apply to parts where such traceability generally does not exist? (i.e. parts sourced from the open market)



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"Reasonable Doubt" that an Electronic Part is Authentic

- Definition of "*suspect counterfeit electronic part*" in the final rule under DFARS Case 2012-D055
  - *… an electronic part for which credible evidence (including, but not limited to, visual inspection or testing) provides reasonable doubt that the electronic part is authentic.*

- Original Component Manufacturers (OCMs) ….
  - Are in the best position to identify *"credible evidence"*
  - Have a stake in identifying and stopping counterfeiters of its trademarked products
  - Generally do not support products that are not purchased from the OCM or its authorized distributors, *even for those parts the OCM chose to discontinue and which are no longer available for sale from the OCM or its authorized distributors*

- Recommendations for DoD to consider…
  - Provide guidance on establishing *"sufficient reason to suspect"* in the absence of assistance from OCMs
  - Pursue a means for contractors to obtain assistance from OCMs.

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Alignment of DoD and Contractor Systems

- Alignment of system implementation between DoD and its contractors is crucial to preventing the penetration of counterfeit electronic parts.
- Providing insight on how DoD is instructing its own personnel would guide contractors in enhancing and aligning their own “systems”.
  - NDAA2012§818(b)(2) - Guidance to Department components engaged in the purchase of electronic parts …
    - risk-based approach
    - training personnel
    - sourcing decisions
    - traceability of parts
    - inspecting and testing parts
    - reporting
    - quarantining
    - corrective
  - NDAA2012§818(b)(3) - Guidance on remedial actions … including consideration of whether to suspend or debar a supplier

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Thank you

Henry Livingston

Engineering Fellow & Technical Director

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